

KSEM 2019 Program

28-30 August, 2019

[Titania Hotel](http://www.titania.gr) (www.titania.gr)

Address: 52 Panepistimiou Avenue, Athens, 106 78, Greece

Day 0	August 27, 2019
17:00-20:00	Registration (Europa Hall)

Day 1	August 28, 2019		
08:30-17:00	Registration (Europa Hall)		
09:00-09:15	Opening (Europa Hall)		
09:15-10:15	Keynote 1: Professor Stefanos Kollias, University of Lincoln, UK Chair: Christos Douligeris, University of Piraeus, GR (Conference Room Niki)		
10:15-10:45	Coffee Break		
10:45-12:40	Session A1: Formal Reasoning and Ontologies Chair: Dimitris Plexousakis (Conference Room Niki)	Session B1: Recommendation Algorithms and Systems I Chair: Ioannis Voyatzis (Conference Room Socratis)	Session C1: Social Knowledge Analysis and Management I Chair: Wenzhong Li (Conference Room Platon)
12:40-14:00	Lunch (Titania Hotel)		
14:00-15:15	Session A2: Data Processing and Data Mining I Chair: Petros Spachos (Conference Room Niki)	Session B2: Recommendation Algorithms and Systems II Chair: Sarandis Mitropoulos (Conference Room Socratis)	Session C2: Social Knowledge Analysis and Management II Chair: Dimitris Karagiannis (Conference Room Platon)
15:15-15:45	Coffee Break		
15:45-17:45	Session A3: Data Processing and Data Mining II Chair: Roza Mavropodi (Conference Room Niki)	Session B3: Image and Video Data Analysis Chair: Sarandis Mitropoulos (Conference Room Socratis)	Session C3: Deep Learning Chair: Andrea Passerini (Conference Room Platon)
15:45-17:45	Steering Committee Meeting (Conference Room Athina)		
18:00-20:00	Cultural Event Guided Tour of the Acropolis Museum (www.theacropolismuseum.gr)		

Day 2	August 29, 2019		
08:45-17:00	Registration (Europa Hall)		
09:00-10:15	Session A4: Knowledge Graph and Knowledge Management I Chair: Zhi Jin (Conference Room Niki)	Session B4: Machine Learning Chair: Huawei Liu (Conference Room Socratis)	Session C4: Knowledge Engineering Applications I Chair: Dimitris Apostolou (Conference Room Platon)

10:15-10:45	Coffee Break		
	Poster Session Chair: Theodoros Karvounidis (Conference Room Europa Hall)		
10:45-11:45	Keynote 2: Professor Andrea Passerini, University of Trento, IT Chair: Dimitris Plexousakis, University of Crete and FORTH, GR (Conference Room Niki)		
11:45-13:25	Session A5: Knowledge Graph and Knowledge Management II Chair: Dimitris Kallergis (Conference Room Niki)	Session B5: Probabilistic Models and Applications Chair: Chengqi Zhang (Conference Room Socratis)	Session C5: Knowledge Engineering Applications II Chair: Li Li (Conference Room Platon)
13:15-14:30	Lunch (Titania Hotel)		
14:30-15:30	Keynote 3: Professor Xin Geng, Southeast University, CH Chair: Gang Li, Deakin University, Geelong, AU (Conference Room Niki)		
15:30-16:00	Coffee Break		
16:00-17:30	Session A6: Knowledge Graph and Knowledge Management III Chair: Krzysztof Kluza (Conference Room Niki)	Session B6: Text Mining and Document Analysis I Chair: Debora Nozza (Conference Room Socratis)	Session C6: Knowledge Engineering Applications III Chair: Ana-Maria Ghiran (Conference Room Platon)
20:00-23:00	Gala Dinner Traditional Greek Tavern in the area of Plaka (Stamatopoulos Tavern www.stamatopoulostavern.gr)		

Day 3	August 30, 2019		
09:15-12:00	Registration (Europa Hall)		
09:30-10:45	Session A7: Knowledge Theories & Models I Chair: Theodoros Karvounidis (Conference Room Niki)	Session B7: Text Mining and Document Analysis II Chair: Dimitrios Tzouvaras (Conference Room Socratis)	Session C7: Network Knowledge Representation and Learning I Chair: Gokhan Bilgin (Conference Room Platon)
10:45-11:15	Coffee Break		
11:15-12:30	Session A8: Knowledge Theories & Models II Chair: Gang Li (Conference Room Niki)	Session B8: Text Mining and Document Analysis III Chair: Min Yu (Conference Room Socratis)	Session C8: Network Knowledge Representation and Learning II Chair: Xin Geng (Conference Room Platon)
12:30-13:30	Keynote 4: Professor Dimitrios Tzouvaras, Information Technologies Institute and CERTH, GR Chair: Dimitris Karagiannis, University of Vienna, Vienna, AT (Conference Room Niki)		
13:30-14:30	Closing & Lunch (Titania Hotel)		

Keynote 1: Stefanos Kollias

09:15-10:15, Aug 28, Chair: Christos Douligeris, Conference Room Niki

Deep Neural Networks: Latent Information Extraction, Domain Adaptation & Uncertainty Estimation

Abstract:

Development and use of Deep Neural Networks (DNNs) has been a key research issue in the last few years. This usually involves training of a CNN, CNN-RNN, GAN, or Capsule type of network for classification, regression, or prediction purposes, in a large variety of application domains. In this presentation, and based on our recent research results, we will focus on extraction of latent information from trained DNNs, on using this information for explaining the DNN decision making, on adapting the generated knowledge in other domains and on providing cues about the decision uncertainty.

In our approach, we first leverage the feature extraction power inherent to DNNs, through a combination of transfer learning, k-means clustering and k-Nearest Neighbour classification of DNN learned representations; we use this to perform adaptation of the DNN data-driven knowledge to datasets from different domains, or distributions. New loss function types can be used in this procedure.

Nevertheless, training DNNs suffers from the need of availability of large amounts of labelled data. Such limitations can be reduced by adopting a recent Bayesian approach, which can lead to self-annotating systems. We describe such an approach which uses approximate variational inference for deep models to estimate uncertainty within supervised self-training.

Examples from real life problems are provided for illustrating the performance of the presented approaches.

Keynote 2: Andrea Passerini

10:45-11:45, Aug 29, Chair: Dimitris Plexousakis, Conference Room Niki

On the combination of knowledge and learning

Abstract:

Knowledge representation and machine learning are two complementary aspects that can guide the acquisition of information in intelligent systems. The success of deep learning technologies in domains like computer vision, natural language processing or game playing has shown the immense potential of machine learning in changing our societies and everyday lives. On the other hand, the high-level reasoning capabilities of humans and their ability to quickly adapt to novel problems are still out of reach of current artificial intelligence systems. In this talk I will argue that a combination of knowledge and learning is crucial to achieve truly general and human-like intelligence. I will provide an introduction to the fields of statistical relational learning and neuro-symbolic integration, and present an overview of the most recent results of my research in these fields.

Keynote 3: Xin Geng

14:30-15:30, Aug 29, Chair: Gang Li, Conference Room Niki

Unleash the power of label space: label enhancement for label distribution learning

Abstract:

In the existing machine learning literature, the labels of the training examples are usually just used in the calculation of loss. Most sophisticated operations are actually conducted on the instances, such as feature extraction, feature selection, manifold embedding, dimensionality reduction, etc. Researchers take obviously more efforts in the feature space than in the label

space, which is not strange since labels are traditionally represented by logical values, i.e., 1 if the label is relevant to the instance and 0 otherwise. However, if we can somehow transform the logical label vectors into real-valued label vectors, then we can expect much more profound analysis in the label space.

Label distribution learning (LDL) is a recently proposed machine learning paradigm, where each instance is labeled by a real-valued label vector called label distribution. Each element in the label distribution indicates the description degree of the corresponding label to the instance. Considering most existing data sets are annotated by logical labels, we need a way to transform logical labels into label distributions, which is called label enhancement. Label enhancement could unleash the power of label space: many analytic operations meant for the feature space are now applicable to the label space!

Keynote 4: Dimitrios Tzovaras

12:30-13:30, Aug 30, Chair: Dimitris Karagiannis, Conference Room Niki

AI-Enhanced Computer Vision for Service Robots

Abstract:

While traditional computer vision approaches can address to an extent the needs of service robots operating in relatively constrained environments, further advanced, AI-enhanced computer vision is required for service robots that operate in real environments, with a high degree of autonomy. Computer vision empowered with deep models, optimization-based generative, discriminative and hybrid tracking, as well as coupled semantic constraints and hierarchical knowledge representations, can lead to key advances robot perception, cognition, navigation and human-robot interaction capabilities.

In this line, this talk focuses first on fused, optimization-based metric and semantic home environment mapping, as well as on object recognition and 6DoF object pose estimation based on deep models, which advance accuracy so as to allow robust object grasping by a mobile manipulator robot in real environments. Focusing then on human tracking, a hybrid human body pose tracker has been developed, based on the coupling of an adaptive model-based generative approach with a discriminative and semantics. Alongside, methods have been developed for human activity recognition and on top of this, social-aware mobile robot navigation. Moreover, human emotion recognition through computer vision and multimodal fusion is a further research topic addressed herein. In order to further enhance robot learning by demonstration through AI, we have focused on joint hand and object detection and tracking in 3D, based on RGBD data, coupled with automatic key-frame extraction based on derivative graphs that drives the necessary subsequent robot learning functions. Notably, our research also extends robot learning by demonstration within collaborative human-robot working scenarios. Last but not least, our AI-enhanced computer vision efforts have also been oriented to the joint mapping of the surface and subsurface space, by coupling stereo vision of a field mobile robot, rover, and the processing of data derived from a Ground Penetrating Radar (GPR) on-board the rover.

Applications of the above will be presented, in diverse application fields, which include personal domestic service robots, professional service robots applied in agile manufacturing and field service robots.

Session A1 Formal Reasoning and Ontologies

10:45-12:40, Aug 28, Chair: Dimitris Plexousakis, Conference Room Niki

A Smart Search-Based Ontology Visualization Tool Using SPARQL Patterns, Mariem Neji, Fatma Ghorbel and Bilel Gargouri, Miracl Laboratory, Tunisia

Inconsistency Handling for Partially Preordered Ontologies: Going Beyond Elect, Sihem Belabbès and Salem Benferhat, CRIL Université d'Artois, France

Semantic Modeling of Textual Relationships in Cross-Modal Retrieval, Jing Yu, Chenghao Yang, Zengchang Qin, Zhuoqian Yang, Yue Hu and Weifeng Zhang, Institute of Information Engineering, Chinese Academy of Sciences, China

Centralized Reasoning Translation and Its Computing Complexity for Heterogeneous Semantic Mappings, Xiaofei Zhao, Zhiyong Feng and Hongji Yang, School of Computer Science and Technology, Tianjin University, China

Session B1 Recommendation Algorithms and Systems I

10:45-12:40, Aug 28, Chair: Ioannis Voyatzis, Conference Room Socratis

PRTIRG: A Knowledge Graph for People-Readable Threat Intelligence Recommendation, Ming Du, Jun Jiang, Zhengwei Jiang, Zhigang Lu and Xiangyu Du, University of Chinese Academy of Sciences, China

Socially-aware and sequential embedding for cold-start recommendation, Kexin Huang, Li Li, Xiaofei Xu and Ye Du, Southwest University, China

Sequential recommendation based on long-term and short-term user behavior with Self-Attention, Xing Wei, Xianglin Zuo and Bo Yang, Jilin University, China

Multi-attention Item Recommendation Model Based on Social Relations, Yuan Li and Kedian Mu, Peking University, China

A Network Embedding and Clustering Algorithm for Expert Recommendation Service, Xiaolong Xu and Weijie Yuan, Nanjing University of Posts and Telecommunications, China

Session C1 Social Knowledge Analysis and Management I

10:45-12:40, Aug 28, Chair: Wenzhong Li, Conference Room Platon

UAFA: Unsupervised Attribute-Friendship Attention Framework for User Representation, Yuchen Zhou, Yanmin Shang, Yanan Cao, Yanbing Liu and Jianlong Tan, Institute of Computing Technology, Chinese Academy of Science, China

Retweet Prediction using Context-aware Coupled Matrix-Tensor Factorization, Bo Jiang, Feng Yi and Zhigang Lu, University of Chinese Academy of Sciences, China

A Simple and Effective Community Detection Method Combining Network Topology with Node Attributes, Yue Song, Dongxiao He and Di Jin, School of Computer Science and Technology, College of Intelligence and Computing, Tianjin University, China

Location-Interest-Aware Community Detection for Mobile Social Networks based on Auto Encoder, Ming Chen, Wenzhong Li, Sanglu Lu and Daoxu Chen, State Key Laboratory for Novel Software Technology, Nanjing University, Nanjing, China

Session A2 Data Processing and Data Mining I

14:00-15:15, Aug 28, Chair: Petros Spachos, Conference Room Niki

ProteinA: An approach for analyzing and visualizing protein conformational transitions using fuzzy and hard clustering techniques, Silvana Albert and Gabriela Czibula, Babeş-Bolyai University, Romania

Software defect prediction using a hybrid model based on semantic features learned from the source code, Diana-Lucia Miholca and Gabriela Czibula, Babeş-Bolyai University, Romania

A Novel Method for Highly Imbalanced Classification with Weighted Support Vector Machine, Biao Qi, IIE, China

A study on applying relational association rule mining based classification for predicting the academic performance of students, Liana Maria Crivei, Gabriela Czibula and Andrei Mihai, Babeş-Bolyai University, Romania

Session B2 Recommendation Algorithms and Systems II

14:00-15:15, Aug 28, Chair: Sarandis Mitropoulos, Conference Room Socratis

Mixing-RNN: A Recommendation Algorithm Based on Recurrent Neural Network, Yan Chu, Lan Luan, Guang Li and Zhengkui Wang, Harbin Engineering University, China

SCCF Parameter and Similarity Measure Optimization and Evaluation, Wissam Al Jurdi, Chady Abou Jaoude, Miriam El Khoury Badran, Jacques Bou Abdo, Jacques Demerjian and Abdallah Makhoul, Antonine University, Lebanon

Deep Neighbor Embedding for Accurate Evaluation of Large Portfolios of Variable Annuities, Xiaojuan Cheng, Wei Luo, Gang Li and Guojun Gan, Deakin University, Australia

NRSA: Neural Recommendation with Summary-aware Attention, Hongtao Liu, Pengfei Jiao, Qiyao Peng, Wenjun Wang, Yueheng Sun and Peiyi Wang, Tianjin University, China

Paper Recommendation with Item-level Collaborative Memory Network, Mei Yu, Yue Hu, Xuewei Li, Mankun Zhao, Tianyi Xu, Hongwei Liu, Linying Xu and Ruiguo Yu, Tianjin University, China

Session C2 Social Knowledge Analysis and Management II

14:00-15:15, Aug 28, Chair: Dimitris Karagiannis, Conference Room Platon

A New Multi-objective Evolution Model for Community Detection in Multi-layer Networks, Xuejiao Chen, Chao Gao and Xianghua Li, Southwest University, Chongqing, China

Jointly Modeling Community and Topic in Social Network, Yunlei Zhang, Nianwen Ning, Jinna Lv, Chenguang Song and Bin Wu, Beijing University of Posts and Telecommunications, China

A Social Relationships Enhanced Credit Risk Assessment Approach, Caihong Sun, Chengcheng Deng, Wei Xu and Jun Su, Renmin University of China, China

Session A3 Data Processing and Data Mining II

15:45-17:45, Aug 28, Chair: Roza Mavropodi, Conference Room Niki

Strict Subspace and Label-space Structure for Domain Adaptation , Ying Li, Pei Zhang, Lin Cheng, Yaxin Peng and Chaomin Shen, East China Normal University, China
Multi-view locality preserving embedding with view consistent constraint for dimension reduction , Yun He, Weiling Cai, Ming Yang and Fengyi Song, Nanjing Normal University, China
Research on Ship Classification Based on Trajectory Association , Tao Zhang, Shuai Zhao and Junliang Chen, State Key laboratory of Networking and Switching Technology, Beijing University of Posts and Telecommunications, China
Learning a Subclass of Deterministic Regular Expression with Counting , Xiaofan Wang, Institute of Software Chinese Academic of Science, China
Aggregately Regularized Multi-task Matrix Factorization for Household Energy Breakdown , Hongtao Wang, Miao Zhao, Chunlan Niu and Hongmei Wang, North China Electric Power University, China

Session B3 Image and Video Data Analysis

15:45-17:45, Aug 28, Chair: Sarandis Mitropoulos, Conference Room Socratis

Implicit Rating Methods Based on Interest Preferences of Categories for Micro-Video Recommendation , Jie Chen, Junjie Peng, Lizhe Qi, Gan Chen and Wenqiang Zhang, Shanghai University, China
An Enhanced Deep Hashing Method for Large-Scale Image Retrieval , Cong Chen, Weiqin Tong and Xuehai Ding, Shanghai University, China
Spatio-Temporal Correlation Graph for Association Enhancement in Multi-Object Tracking , Zhijie Zhong, Hao Sheng, Yang Zhang, Yubin Wu, Jiahui Chen and Wei Ke, Beihang University, China
Finger Gesture Recognition Based on 3D-accelerometer and 3D-gyroscope , Wenchao Ma, Junfeng Hu and Li Liu, School of Big Data & Software Engineering, Chongqing University, China

Session C3 Deep Learning

15:45-17:45, Aug 28, Chair: Andrea Passerini, Conference Room Platon

DST: A Deep Urban Traffic Flow Prediction Framework Based on Spatial-Temporal Features , Jingyuan Wang and Li Li, Southwest University, China
Small-scale Data Classification Based on Deep Forest , Zili Zhang and Meiyang Zhang, Southwest University, China
EPAD: a Text Annotation Tool with Pre-annotation Based on Deep Learning , Minbo Ma, Fei Teng, Zheng Ma, Lufei Huang, Ming Xiao and Xuan Li, School of Information Science and Technology, Southwest Jiaotong University, China
D3N: DGA Detection with Deep-Learning through NXDomain , Mingkai Tong, Xiaoqing Sun, Shize Zhang, Jiahai Yang, Hui Zhang and Shuang Zhu, Tsinghua University, China

Object Detection by Combining Deep Dilated Convolutions Network and Light-weight Network, Yu Quan, Zhixin Li and Canlong Zhang,
Guangxi Normal University, China

Session A4 Knowledge Graph and Knowledge Management I

09:00-10:15, Aug 29, Chair: Zhi Jin, Conference Room Niki

Enhancing Graph-based Keywords Extraction with Node Association, Huifang Ma, Shuang Wang, Ning Li and Miao Li,
NorthWest Normal University, China

Transl: Translating Infinite Dimensional Embeddings based on Trend Smooth Distance, Xiaobo Guo, Neng Gao, Lei Wang and Xin Wang,
School of Cyber Security, University of Chinese Academy of Sciences, Beijing, China

A knowledge-based conceptual modelling approach to bridge design thinking and intelligent environments, Michael Walch, Takeshi Morita, Dimitris Karagiannis and Takahira Yamaguchi, Universität Wien, Austria

Named Entity Recognition in Traditional Chinese Medicine Clinical Cases Combining Knowledge Graph with BiLSTM-CRF, Zhe Jin, Yin Zhang, Haodan Kuang, Liang Yao and Yunhe Pan, Zhejiang University, China

Session B4 Machine Learning

09:00-10:15, Aug 29, Chair: Huawei Liu, Conference Room Socratis

Gated Self-Attentive Encoder for Neural Machine Translation, Xiangpeng Wei, Yue Hu and Luxi Xing, Institute of Information Engineering, Chinese Academy of Sciences, China

RGCN: Recurrent Graph Convolutional Networks for Target-dependent Sentiment Analysis, Junjie Chen, Hou Honxu, Gao Jing, Ji Yatu and Bai Tiangang,
Inner Mongolia University, China

Evidential Artificial Immune Recognition System, Abir Lahsoui and Zied Elouedi,
Institut Suprieur de Gestion de Tunis, Tunisia

An Evidential Semi-Supervised Label Aggregation Approach, Lina Abassi and Imen Boukhris, LARODEC, Tunisia

Session C4 Knowledge Engineering Applications I

09:00-10:15, Aug 29, Chair: Dimitris Apostolou, Conference Room Platon

DRAM: A Deep Reinforced Self-attentive Model for Predicting What Happens Next, Shuqi Yu, Linmei Hu and Bin Wu,
Beijing University of Posts and Telecommunications, China

Permission-Based Feature Scaling Method for Lightweight Android Malware Detection, Zhu Dali and Xi Tong,
Institute of Information Engineering, Chinese Academy of Science, China

Agile Query Processing in Statistical Databases: A Process-In-Memory Approach, Shanshan Lu, Peiquan Jin, Lin Mu and Shouhong Wan,
University of Science and Technology of China, China

Improved Feature selection Algorithm for Biological Sequences Classification, Naoual Guannoni, Faouzi Mhamdi and Mourad Elloumi,
Faculty of Sciences of Tunis, Tunisia

Session A5 Knowledge Graph and Knowledge Management II

11:45-13:25, Aug 29, Chair: Dimitris Kallergis, Conference Room Niki

Entity Linking Based on Graph Model and Semantic Representation, Ningyu Ma, Xiao Liu and Yulun Gao, SouthEast University, China

Adaptive-Skip-TransE Model: Breaking Relation Ambiguities for Knowledge Graph Embedding, Xiaobo Guo, Shoukang Han, Lei Wang, Zeyi Liu and Nan Mu, School of Cyber Security, University of Chinese Academy of Sciences, Beijing, China

The Model-driven Enterprise Data Fabric: a Proposal Based on Conceptual Modelling and Knowledge Graphs, Ana Maria Ghiran and Robert Andrei Buchmann, Babes-Bolyai University of Cluj-Napoca, Romania

Leveraging User preferences for Community Search via Attribute Subspace, Haijiao Liu, Huifang Ma, Yang Chang, Zhixin Li and Wenjuan Wu, NorthWest Normal University, China

Session B5 Probabilistic Models and Applications

11:45-13:25, Aug 29, Chair: Chengqi Zhang, Conference Room Socratis

Improved Text-independent Speaker identification and verification with Gaussian Mixture Models, Rania Chakroun and Mondher Frikha, ENIS, Tunisia

TagDeepRec: Tag Recommendation for Software Information Sites Using Attention-Based Bi-LSTM, Can Li, Ling Xu, Meng Yan, Jianjun He and Zuli Zhang, Chongqing University, China

Application of Probabilistic Process Model for Smart Factory Systems, Junsup Song, Yeongbok Choe and Moonkun Lee, Chonbuk National University, South Korea

A Distributed Topic Model Method for Large-scale Streaming Text, Yicong Li, Dawei Feng, Menglong Lu and Dongsheng Li, National University of Defense Technology, China

Session C5 Knowledge Engineering Applications II

11:45-13:25, Aug 29, Chair: Li Li, Conference Room Platon

Enhancing the Conciseness of Linked Data by Discovering Synonym Predicates, Subhi Issa, Fayçal Hamdi and Samira Si-Said Cherfi, Conservatoire National des Arts et Métiers, France

A Comparative Analysis Methodology for Process Mining Software Tools, Panagiotis Drakoulogkonas and Dimitrios Apostolou, University of Piraeus, Greece

IDML: Identifier-based Markup Language for Resource-constrained Smart Objects in WoT, Wuming Luo, Tsinghua University, China

Understanding DMN: context, directions and perspectives of Decision Model and Notation, Weronika T. Adrian, Krzysztof Kluza, Antoni Ligeza and Piotr Wiśniewski, University of Calabria; AGH University of Science and Technology, Italy

Multimodal Learning with Triplet Ranking Loss for Visual Semantic Embedding Learning, Zhanbo Yang and Li Li, Southwest University, China

Session A6 Knowledge Graph and Knowledge Management III

16:00-17:30, Aug 29, Chair: Krzysztof Kluza, Conference Room Niki

Visualization of Customer Satisfaction Linked to the Behavior using a Process-Based Web Questionnaire, Hisashi Masuda and Wilfrid Utz,
Kyoto University, Japan

A Multilingual Semantic Similarity-Based Approach for Question-Answering Systems, Wafa Wali, Fatma Ghorbel, Bilel Gargouri, Fayçal Hamdi and Elisabeth Metais,
MIRACL Laboratory, University of Sfax, Tunisia

Building Chinese Legal Hybrid Knowledge Network, Bi Sheng, Yanhui Huang, Xiya Cheng and Meng Wang, Southeast University, China

From Attribute Relationship Diagrams to Process (BPMN) and Decision (DMN) Models, Krzysztof Kluza, Piotr Wiśniewski, Weronika T. Adrian and Antoni Ligeza,
AGH University of Science and Technology, Poland

Session B6 Text Mining and Document Analysis I

16:00-17:30, Aug 29, Chair: Debora Nozza, Conference Room Socratis

Dynamic Task-specific Factors for Meta-Embedding, Yuqiang Xie, Yue Hu, Luxi Xing and Xiangpeng Wei,
Institute of Information Engineering, Chinese Academy of Sciences, China

Automated Mining and Checking of Formal Properties in Natural Language Requirements, Xingxing Pi, Jianqi Shi, Yanhong Huang and Hansheng Wei,
National Trusted Embedded Software Engineering Technology Research Center, East China Normal University, China

A Shallow Semantic Parsing Framework for Event Argument Extraction, Luo Zhunchen and Sui Guobin,
PLA Academy of Military Science, China

Training-less Multi-label Text Classification Using Knowledge Bases and Word Embeddings, Wael Alkhatib, Christoph Rensing and Steffen Schnitzer,
Multimedia Communications Lab (KOM), TU-Darmstadt, Germany

Session C6 Knowledge Engineering Applications III

16:00-17:30, Aug 29, Chair: Ana-Maria Ghiran, Conference Room Platon

Data and Knowledge: An Interdisciplinary Approach for Air Quality Forecast, Cheng Feng, Wendong Wang, Ye Tian, Xiangyang Gong and Xirong Que,
Beijing University of Posts and Telecommunications, China

A Multi-label Active Learning Approach for Mobile App User Review Classification, Montassar Ben Messaoud, Ilyes Jenhani, Nermine Ben Jemaa and Mohamed Wiem Mkaouer, PMU, Saudi Arabia

A Causality-based Approach to Assessing Inconsistency for Multi-context Systems, Kedian Mu, Peking University, China

Extracting hidden preferences over partitions in hedonic cooperative games, Athina Georgara, Dimitrios Troullinos and Georgios Chalkiadakis,
Technical University of Crete, Greece

MAS-based Approach for Inventory pre- and post-Disruption Decision Support, Kessentini Maroua, Narjès Bellamine Ben Saoud and Sami Sboui,
ENSI, Tunisia

Session A7 Knowledge Theories & Models I

09:30-10:45, Aug 30, Chair: Theodoros Karvounidis, Conference Room Niki

A Novel Genetic Algorithm Approach to Improving Error Correction Output Coding, Yu-Ping Zhang and Kun-Hong Liu,
Software School of Xiamen University, China

A New Monarch Butterfly Optimization Algorithm with SA Strategy, Xitong Wang, Xin Tian and Yonggang Zhang,
Jilin University, China

Practical Scheme for Secure Outsourcing of Coppersmith's Algorithm, Jiayang Liu and Jingguo Bi,
Tsinghua University, China

Reasoning of Causal Direction in Linear Model Based on Spearman's Rank Correlation Coefficient, Boxu Zhao and G.M Luo,
Tsinghua University, China

Session B7 Text Mining and Document Analysis II

09:30-10:45, Aug 30, Chair: Dimitrios Tzovaras, Conference Room Socratis

Word Embeddings for Unsupervised Named Entity Linking, Debora Nozza, Cezar Sas, Elisabetta Fersini and Enza Messina,
University of Milano Bicocca, Italy

Effectively Classify Short Texts with Sparse Representation using Entropy Weighted constraint, Hui-Fang Ma, Ting Tuo, Zhi-Xin Li and Xiang-Hong Lin,
Northwest Normal University, China

A New Method for Complex Triplet Extraction of Biomedical Texts, Xiao Wang, Qing Li, Xuehai Ding and Guoqing Zhang,
School of Computer Engineering and Science, Shanghai University, China

Assessing semantic similarity between concepts using Wikipedia based on nonlinear fitting, Guangjian Huang, Yuncheng Yuncheng, Wenjun Ma and Weiru Liu,
South China Normal University, China

Session C7 Network Knowledge Representation and Learning I

09:30-10:45, Aug 30, Chair: Gokhan Bilgin, Conference Room Platon

Exploiting Tri-types of Information for Attributed Network Embedding, Cheng Zhang, Le Zhang, Xiaobo Guo and Yin Qi,
School of Cyber Security, University of Chinese Academy of Sciences, Beijing, China

Answer-focused and Position-aware Neural Network for Transfer Learning in Question Generation, Kangli Zi, Xingwu Sun, Shi Wang, Xiaoming Feng, Zhaobo Ma and Cungen Cao,
Key Laboratory of Intelligent Information Processing, Institute of Computer Technology, Chinese Academy of Sciences, China

Syntax-aware Sentence Matching with Graph Convolutional Networks, Yangfan Lei, Yue Hu, Xiangpeng Wei, Luxi Xing and Quanchao Liu,
Institute of Information Engineering, Chinese Academy of Sciences, China

Music Genre Classification via Sequential Wavelet Scattering Feature Learning, Evren Kanalici and Gokhan Bilgin, Yildiz Technical University, Turkey

Session A8 Knowledge Theories & Models II

11:15-12:30, Aug 30, Chair: Gang Li, Conference Room Niki

Urban Traffic Flow Prediction Using a Gradient-boosted Method Considering Dynamic Spatio-temporal Correlations, Jie Yang, Linjiang Zheng and Dihua Sun,
Chongqing University, China

A Trust Network Model Based on Hesitant Fuzzy Linguistic Term Sets, Jieyu Zhan,
Yuncheng Jiang, Wenjun Ma, Xudong Luo and Weiru Liu,
South China Normal University, China

An Improved Discretization-based Feature Selection via Particle Swarm Optimization,
Jiping Lin, Yu Zhou and Junhao Kang,
Shenzhen university, China

Session B8 Text Mining and Document Analysis III

11:15-12:30, Aug 30, Chair: Min Yu, Conference Room Socrates

Research on Resultative/Directional Structures Based on the Corpus of International Chinese Textbooks, Dongdong Guo, Jihua Song, Weiming Peng and Yinbing Zhang,
Beijing Normal University, China

An Automatic Spelling Correction Method for Classical Mongolian, Min Lu, Feilong Bao,
Guanglai Gao, Weihua Wang and Hui Zhang, Inner Mongolia University, China

A Two-Stage Model Based on BERT for Short Fake News Detection, Chao Liu, Xinghua
Wu, Min Yu, Gang Li, Jianguo Jiang and Weiqing Huang,
Institute of Information Engineering, Chinese Academy of Sciences, China

Unsupervised Cross-Lingual Sentence Representation Learning via Linguistic Isomorphism, Shuai Wang, Lei Hou, Meihan Tong and Juanzi Li,
Tsinghua University, China

Session C8 Network Knowledge Representation and Learning II

11:15-12:30, Aug 30, Chair: Xin Geng, Conference Room Platon

Efficient network representations learning : An edge-centric perspective, Shichao Liu,
Lida Zhu, Fuxi Zhu, Zhongfei Zhang and Wen Zhang,
College of Informatics, Huazhong Agricultural University, China

Representation Learning in Academic Network based on Research Interest and Meta-path, Wei Zhang, Ying Liang and Xiangxiang Dong,
Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China

Knowledge-Aware Self-Attention Networks for Document Grounded Dialogue Generation, Xiangru Tang and Po Hu,
Central China Normal University, China

Feature-aware Attentive Convolutional Neural Network for Sequence Processing,
Jingchao Dai, Kaiqi Yuan, Yuexiang Xie and Ying Shen,
Peking University, China

Posters

10:15-10:45, Aug 29, Chair: Theodoros Karvounidis, Conference Room Europa Hall

Text-Based Fusion Neural Network for Rumor Detection , Yixuan Chen, Liang Hu and Jie Sui, University of Chinese Academy of Sciences, China
AutoSimP: An approach for predicting proteins' structural similarities using an ensemble of deep autoencoders , Mihai Teletin, Gabriela Czibula and Carmina Codre, Faculty of Mathematics and Computer Science, Babes-Bolyai University, Romania
A Multi-View Spatial-Temporal Network for Vehicle Refueling Demand Inference , Bo Ma, Yating Yang, Guangyi Zhang, Fan Zhao and Yi Wang, Xinjiang Institute of Physical and Chemical Technology, China
State Representation Learning for Minimax Deep Deterministic Policy Gradient , Dapeng Hu, Xuesong Jiang, Xiumei Wei and Jian Wang, Qilu University Of Technology (Shandong Academy Of Sciences), China
Text to Image Synthesis using Two-stage Generation and Two-stage Discrimination , Zhiqiang Zhang, Yunye Zhang, Wenxin Yu, Gang He, Ning Jiang, Gang He, Yibo Fan and Zhuo Yang, Southwest University of Science and Technology, China
Learning Continuous User and Item Representations for Neural Collaborative Filtering , Qinglin Jia, Xiao Su and Zhonghai Wu, Peking University, China
Partial alignment of data sets based on fast intrinsic feature match , Yaxin Peng, Naiwu Wen, Xiaohuang Zhu and Chaomin Shen, East China Normal University, China
Low-sampling Imagery Data Recovery by Deep Learning Inference and Iterative Approach , Jiping Lin, Yu Zhou and Junhao Kang, Shenzhen University, China
Overview of Generation Methods for Business Process Models , Piotr Wiśniewski, Krzysztof Kluza, Krystian Jobczyk and Antoni Ligeza, AGH University of Science and Technology, Poland
Context Aware Community Formation for MAS-oriented Adaptive Collaboration Systems , Wei Liu and Jingzhi Guo, Hubei Province Key Laboratory of Intelligent Robot, China
Knowledge Management and Modelling in Higher Education Institutions: an HR perspective , Diana Ivana, Mihaela Drăgan and Daniel Metz, Babeş-Bolyai University, Romania
A Distributed Topic Model Method for Large-scale Streaming Text , Yicong Li, Dawei Feng, Menglong Lu and Dongsheng Li, National University of Defense Technology, China

KSEM 2019	The 12th international conference on
	Knowledge Science Engineering Management
28 - 30 AUGUST ATHENS GREECE	

Local Organization Committee

- Roza Mavropodi (Chair), University of Piraeus, Piraeus, Greece
- Apostolos Karalis, University of Piraeus, Piraeus, Greece
- Dimitra Tzoumpa, University of Piraeus, Piraeus, Greece
- Dimitris Kotsifakos, University of Piraeus, Piraeus, Greece
- Eleni Seralidou, University of Piraeus, Piraeus, Greece
- Epi Angelaki, University of Piraeus, Piraeus, Greece
- Panagiotis Drakoulogkonas, University of Piraeus, Piraeus, Greece
- Panos Gotsiopoulos, University of Piraeus, Piraeus, Greece
- Vassilis Vasilakopoulos, University of Piraeus, Piraeus, Greece
- Zacharenia Garofalaki, University of Piraeus, Piraeus, Greece

Finance and Registration Chair

- Theodoros Karvounidis, University of Piraeus, Piraeus, Greece

Publication Committee Co-Chairs

- Dimitris Kallergis, University of West Attica and University of Piraeus, Piraeus, Greece
- Themistoklis Panayiotopoulos, University of Piraeus, Piraeus, Greece

Keynote, Invited Speakers and Workshop Committee Co-Chairs

- Yannis Manolopoulos, Aristotle University of Thessaloniki, Thessaloniki, Greece
- Vassilis Plagianakos, University of Thessaly, Lamia, Greece

Program Committee Co-Chairs

- Christos Douligeris, University of Piraeus, Piraeus, Greece
- Dimitris Karagiannis, University of Vienna, Vienna, Austria
- Dimitris Apostolou, University of Piraeus, Piraeus, Greece

General Co-Chairs

- Gang Li, Deakin University, Geelong, Australia
- Dimitris Plexousakis, University of Crete and FORTH, Heraklion, Greece